



Wyoming Infrastructure Authority

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04-IEP-1K

October 5, 2005

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

DOCKET	
04-IEP-1K	
DATE	OCT - 5 2005
RECD.	OCT - 5 2005

Re: 2005 Draft Integrated Energy Policy Report – CEC-100-2005-007-CTD

Comments of the Wyoming Infrastructure Authority

On Advanced Coal Technologies and Recommended GHG Performance Standard

Dear Commissioners:

The Wyoming Infrastructure Authority (WIA) was created June 10th, 2004, by the state legislature, tasked with diversifying and growing the state's economy through the development of Wyoming's electric transmission infrastructure. The Authority is also responsible for planning, financing, building, maintaining, and operating electric transmission and related facilities.

Wyoming has an interest in serving the electric power requirements of California through a diverse mix of renewable wind and coal resources, utilizing the best in advanced technologies. Already, the Kern River Transmission Pipeline provides 2 BCF/Day of critical natural gas resource from Wyoming to California markets. It is our intent to replicate this successful model in the electric supply market with our world class wind and coal resources.

WIA encourages that CEC energy policy be managed in an effective manner to cautiously balance the need to address potential environmental impacts resulting from electric power generation with the imperative need to ensure that California consumers have access to affordable, reliable, and technically viable electric power supplies. Our comments offer a

To Diversify & Expand the Wyoming Economy, Through Improvements in the State's Electric Transmission Infrastructure

graduated pathway through which we believe you can best fulfill your policy-setting responsibilities. While our comments are critical, they are also intended to constructively offer solutions in pursuit of the commercial deployment of advanced coal technologies.

CEC is well aware that Governor Schwarzenegger has joined with Governors Freudenthal, Hunstman and Guinn to develop the Frontier Line, designed to provide Utah, Nevada and California with abundant, low cost and diversified power supplies. The GHG standard in the CEC policy report runs contrary to the viability of the Frontier Line's success.

First, we ask that you seriously reevaluate the legal foundation of your GHG performance standard. We believe the proposed GHG performance standard raises serious problems under the Commerce Clause of the United States Constitution. Although the standard purports to be fuel-neutral, in fact it is not, since of the likely sources of generation that could serve California in significant quantities, only coal generation cannot meet the standard. The standard thus discriminates against a source of generation and a fuel that does not exist in-state in favor of generation and fuels that do. This discrimination against commerce would be sufficient by itself to place the GHG standard in legal peril. The fact that the standard produces no material in-state benefit, because the amount of GHG emissions prevented would be minuscule as compared to global emissions, further illuminates this peril.

The CEC Report recommends a GHG performance standard under which California utilities would be prevented from making long-term purchases of electricity from fossil fuel based power plants that produce GHG emissions greater than those produced by a new combined-cycle natural gas turbine. A typical conventional coal plant produces roughly twice the amount of GHG emissions as an equivalent sized combined-cycle gas plant. Even unconventional, advanced technology coal plants, such as IGCC, super-critical, and fluidized bed, will produce GHG emissions. (CFB produces more CO₂ because the heat rate is higher, IGCC about the same as supercritical and supercritical only slightly more than traditional sub critical pulverized coal.)

Coal plants, therefore, cannot directly meet this standard unless some form of carbon capture is utilized at the plant and a way is found to store the carbon underground. However, the CEC Report itself indicates that carbon capture and storage on a commercial level is at least ten to fifteen years away. The Report cites EPRI's CoalFleet for Tomorrow Initiative. This initiative is supported by a broad coalition of utilities and suppliers and DOE and is designed to expedite the development and deployment of clean coal technologies. As the CEC Report states, the CoalFleet for Tomorrow initiative expects that clean coal technology will be developed and deployed in three stages. In the second stage – 2012-

2015 – it is expected that demonstration projects using carbon capture will initially be deployed. However, it is not until the third stage – “after 2015-2020” – that projects fully integrating carbon capture systems will be deployed on a commercial basis. Until carbon capture and storage is demonstrated on a commercial basis, developers will be unable to obtain the multi-billion dollar financing needed to make these technologies available on a large scale.

The CEC Report summarizes the issues facing clean coal technologies. Even without carbon capture, IGCC plants are more expensive than conventional plants, and their long-term reliability has not been demonstrated. IGCC plants pose a particular problem in the West both because of loss of efficiency in operation at altitude and because IGCC plants operate less well using the lower Btu coals that predominate in the West. Carbon capture adds an incremental cost of at least 25 percent to the cost of an IGCC plant, and this does not even include the cost of transporting and sequestering the carbon. Methods of transporting and sequestering carbon are under study but have not been demonstrated on a commercial scale.

Carbon capture technologies will therefore not be available in the 2011 time frame which the CEC has identified as the period in which California will need additional base load resources. Even development of a new conventional coal plant requires a very long lead time – as much as 5 years – and the commitment of substantial up-front capital to move through the permitting and pre-construction process. The proposed GHG performance standard is highly likely to convince coal plant developers that the California market is closed for the foreseeable future and they will shift resources to more realistic investment targets.

The CEC Report holds out the possibility that the GHG performance standard could be met with offsets. There has also been mention of the possibility that California would be willing to pay the higher cost of clean coal technology, presumably including offsets. However, the Report does not provide any detail or assurance regarding offsets. The most that is said is that “[a]dditional consideration is needed before determining what role, if any GHG emission offsets should play in complying with such a performance standard.” Therefore, we must argue that the policy is incomplete, and offers no discernable pathway forward.

The CEC Report eloquently catalogues the energy problems California now faces and concludes that “California’s way of life is threatened by its growing dependence on oil and

natural gas, spiraling energy prices, potential supply shortages, and an inadequate and aging energy delivery infrastructure.” It also describes why the use of abundant low-cost western coal must be part of the solution to California’s energy problems. Yet the GHG performance standard creates a hurdle that industry will be unable to meet for at least ten to fifteen years. If adopted in its present form the GHG standard will mean that coal will not be part of California’s energy picture for the foreseeable future.

Our recommended changes to the CEC 2005 IEPR are intended to maintain affordable, technically viable clean coal power supplies as an important contributor to the economic well being of California in the short term and long term future. Our work in RMATS and on the Frontier Line project indicate this resource is critical to California in ensuring that it has reliable, affordable power to meet the growing electricity demand of consumers. Our specific recommendations follow:

1. CEC should suspend adoption and/or implementation of the GHG performance standard pending further technological advances in carbon capture and storage systems.
2. CEC policy guidelines related to advanced coal technologies should be revised to provide support for the commercial deployment of those technologies that can be financed and built now to meet the energy demands of the electric consumers CEC represents. The best available technologies, to meet short and mid-term power requirements, are only those that can be financed and built and operated to provide reliable supplies of electric energy in the foreseeable future. The CEC 2005 IEPR disregards this critical point, and fails to provide support for available advanced coal technologies.
3. We request formal CEC support for a Wyoming-led public-private partnership designed to solicit federal consideration for Wyoming as the site for deploying a commercial-scale Western Integrated Coal Gasification Demonstration Project, with both IGCC demonstration, including carbon sequestration, and DOD clean fuel elements. Aggressive pursuit of such a project will help align key industrial partners, coal miners and operators, and electrical utilities to establish both independent and joint electrical power generation and synthetic fuels. A demonstration project could play a critical catalyst role in meeting the increasing power needs and fuel transportation demands in the Western

U. S. This type of strategic long-term regional planning has tremendous potential value in addressing California’s energy needs.

4. The Frontier Line Project is designed to integrate large amounts of renewable wind and clean coal power resources to meet growing power requirements in Utah, Nevada and California. It is envisioned that this project will be built in several stages, adding additional transmission lines and capacity over time. The project will enable vast amounts of new renewable resources to be constructed and moved to load center markets from remote areas where power resources are abundant. Without base load coal resources, the Frontier

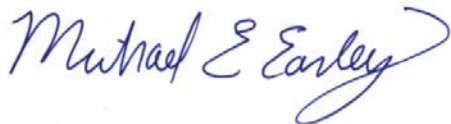
Line Project cannot be built and developing the business case for early investment in the Frontier Line will have a very high, if not insurmountable hurdle. Without base load coal resources, the Frontier Line Project cannot be built and developing the business case for early investment in the Frontier Line will have a very high, if not insurmountable hurdle. If the CEC proceeds toward a final policy on GHG emissions, integrated resources tied to a single overall project should be considered directly in the overall count of GHG emissions levels. The proposed standard should be modified to acknowledge overall emissions, including net reductions associated with renewable generation, tied to such an integrated project.

5. The CEC Report holds out the possibility that the GHG performance standard could be met with offsets. There has also been mention of the possibility that California would be willing to pay the higher cost of clean coal technology, presumably including offsets. If the CEC adopts final rules governing GHG emissions, we recommend a straightforward system be adopted whereby offset payments can be paid directly into a Trust, such as that adopted by the Oregon Energy Facility Siting Council. The State of California can then manage the decisions related to the offset activities. The amount per ton related to the offset program should be assessed in retail California electric rates.

The WIA realizes there are many difficult and complex issues facing California in setting energy policy. We believe it is critical that your first priority related to electric energy is to ensure that adequate, affordable and reliable supplies be made available to meet customer needs. Wyoming stands ready to satisfy many of California's energy needs. However, the energy policy standards which must be met must accommodate realistic solutions. That is the objective of our comments.

Thank you for the opportunity to file these comments

Sincerely,

A handwritten signature in blue ink that reads "Michael E. Easley". The signature is fluid and cursive, with the first and last names being more prominent.

Michael E. Easley
Chairman